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(54) Title: DATA STORAGE APPARATUS AND METHOD FOR HANDLING DATA ON A DATA STORAGE APPARATUS

	UA								SA				UA								SA			
Physical	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21		
1st Format	0	1	2	3	4	5	6	7	S	S	S	8	9	10	11	12	13	14	15	S	S	S		
Fact. Test 12	0	1	2	3	4	5	6	7	S	S	S	8	9	10	11	12	13	14	15	S	S	S		
Slipped	0	1	2	3	4	5	6	7	S	S	S	8	9	10	11	B	12	13	14	15	S	S		
Grown 2	0	1	B	3	4	5	6	7	S	S	2	8	9	10	11	12	13	14	15	S	S	S		
Remap	0	1		3	4	5	6	7	S	S	2	8	9	10	11	12	13	14	15	S	S	S		
Free 1..4	0	F		F	F						F	8	9	10	11	12	13	14	15	S	S	S		
Bubble	0	1		2	3	5	6	7	S	S	4	8	9	10	11	12	13	14	15	S	S	S		
Free 1..6	0	F		F	F	F	F				F	8	9	10	11	12	13	14	15	S	S	S		
Bubble	0	1		2	3	4	5	7	S	S	6	8	9	10	11	12	13	14	15	S	S	S		
Free 4..9	0	1			F	F	F				F	F	F											
Bubble	0	1		2	3	4	5	6	7	S	S	8	9	10	11	12	13	14	15	S	S	S		

(57) Abstract: Real-time audio video applications require guaranteed request service times from a hard disc drive. This requirement is not always fulfilled due to some unexpected delays in service times. Re-allocated sectors are one of the causes of such delays. A scheme for conversion of re-maps into slips in a hard disc drive is suggested. Converting re-allocated sectors into slipped or skipped sectors can prevent such a delay, since slipped sectors cause much less or even negligible performance loss than re-allocated sectors.

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